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**Assignment -3**

Python Programming

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| Assignment Date | 7 OCTOBER 2022 |
| Student Name | Charan P |
| Student Roll Number | 110319106007 |
| Maximum Marks | 2 Marks |

QUESTION:

Write python code for blinking LED and Traffic lights for Raspberry pi.Only

python code is enough, no need to execute in raspberry pi.Note: you are allowed to use web search and complete the assignment.

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| import turtle    # Create a playground for turtles wn = turtle.Screen() wn.bgcolor('white')    # Create turtles tess = turtle.Turtle() alex = turtle.Turtle() henry = turtle.Turtle()    def draw\_housing():  """ Draw a nice housing to hold the traffic lights""" tess.pensize(3) tess.color('black', 'black') tess.begin\_fill() tess.forward(80) tess.left(90) tess.forward(157) tess.circle(40, 180) tess.forward(157) tess.left(90) tess.end\_fill()    draw\_housing()    def circle(t, ht, colr):  """Position turtle onto the place where the lights should be, and turn turtle into a big circle"""  t.penup()  t.forward(40)  t.left(90)  t.forward(ht)  t.shape('circle')  t.fillcolor(colr)  circle(tess, 40, 'green') circle(alex, 100, 'orange') circle(henry, 160, 'red')    # This variable holds the current state of the machine state\_num = 0  def advance\_state\_machine(): |
| global state\_num # The global keyword tells Python not to create a new local variable for state\_num  if state\_num == 0: # Transition from state 0 to state 1 henry.color('darkgrey') alex.color('darkgrey') tess.color('green') wn.ontimer(advance\_state\_machine, 3000) # set the timer to explode in  3000 milliseconds (3 seconds) state\_num = 1 elif state\_num == 1: # Transition from state 1 to state 2 henry.color('darkgrey') alex.color('orange') wn.ontimer(advance\_state\_machine, 1000) state\_num = 2 elif state\_num == 2: # Transition from state 2 to state 3 tess.color('darkgrey') wn.ontimer(advance\_state\_machine, 1000) state\_num = 3 else: # Transition from state 3 to state 0 henry.color('red') alex.color('darkgrey') wn.ontimer(advance\_state\_machine, 2000) state\_num = 0    advance\_state\_machine()  wn.listen() # Listen for events  wn.mainloop() # Wait for user to close window |

OUTPUT:

